Work Orde				*9	1840)*							Page 1
Revision ID:	D3183-044 Bracket Assem	nbly		Accept	*1	1 9000	14 0	100	*	Setup	Start Stop	1 41	S1*. S2*
Start Date: Required Date: Reference:	10/19/12 11/09/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*	ă.		Cust Item ID Customer:) :						
Approvals:	Process Pla	n: <i>12-10-19</i>	Date:	Tooling: SPC (Y/N):		Dat	e:]	Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hou	ırs	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
Draw Nbr	Rev	ision Nbr		TOWNS BOOK BOOK TOWNS AND TOWN TO A TOWN	7 VA. 07 - 100 - 1								
D3183	Rev	Cl											
*1 \\ \A\ \A\ \Bandsaw \\ Jeaspa Bandsaw		BAND SAW Memo Cut blanks:	(1.500" x 2.250") 5.500"	0.00 0.00 long	م.ط	12 12 11			#	{	z		
*110 *110*	·	HAAS CNC VERTICAL	MACHINING #1	0.00	b. n	12 12 28	>		· 4		d		OAS
HAAS I HAAS CNC vertical	machine #1		D3183-4 as per Folio FA3 Scribe batch number	0.00 322 and Dwg D3183	Sidentify as D3	183-					7		9=8 9
120 *120*		QC2- Inspect parts off m	achine FAI/FAIB	0.00	b.A	12/12/21	ජි	,	<u>~</u> 1		4		0AS 08 9-89
QC Quality Control		Memo	4 4	0.00					·		Ψ		<u>~-8</u>

											DQA:	Date	2:
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORM	MANCE / UPE	DATE		<u> </u>	
									•		QA Closed:	Date	e:
Work Ord	ar:					DISPOSITION				/PROCESS			
Part I	۰ ِ No.					Rework Skid-tube Crosstube Scrap Machining Small Fab Thermoforming Finishing Work Order Update Large Fab Composite			Small Fab Finishing	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other	
Root					Descri	ption of work order update		nitial	Act	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved		·			,								·
							AUL	T CATE	GORY				
Landi	Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube					General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misreac	ion Incomplete ions Incomplete/Uenance eled	J _i nclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned Incorre	ct issing Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
		Ripples in	Bend		1	Drill Holes	Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde					Page 2							
Revision ID:	D3183-044 Bracket Assen	nbly		Accept	*N900	040	100)*	Setup	Start Stop	*N: *N:	S1* S2*
Start Date: Required Date: Reference:	10/19/12 11/09/12	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*		Cust Item II Customer:	D:						
Approvals:		n:	Date:	_ 0 _		ite:			Run	Start Stop		R1* R2*
Sequence ID/ Work Center ID 130 *130* QC Quality Control)	Operation Description QC8- Inspect parts - second Memo	and check	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty 4	t Rej Qty		Reject Number	Insp. Stamp AS 04 0-8
*140 *140 Small Fab Small Fab		Small Fab Memo Assemble D	3183-043 as per Dwg D3	0.00 0.00 183.				4x	<u> </u>			J3/0
150 *150* QC		QC5- Inspect part compl	eteness to step on W/O	0.00 J.S				4				

Quality Control

NCR: Y	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE QA Closed: Date:													
Work Orde	er: _					DISPOSITION Rework	1		side to [7]	AGAINST DE	PARTMENT,	/PROCESS Water Jet		Engineering
Part No. NCR No.						Scrap Machining Use-as-is Thermoforming Work Order Update Large Fab			noforming	Small Fab Prod. Eng. Coor. Quali Finishing Rec/Store/Packaging Oth Composite Supplier				
Root Cause		Date	Step	Qty		ption of work order update or Non-conformance	1	nitial iief Eng	Act Descr	ion ription	Sign & Date	Verificatio	n	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved														
							AUL	T CATE	GORY					
Landi		Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio Ripples in	Crimped at n Strip in a Bend	Tube		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Instruct Mainte Mislabe Misread Offset	ion Incomplete tions Incomplete/U enance eled	Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N Power Loss/	ct issing Wrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Folio

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0.00

Memo

Quality Control

W13.01.03

											DQA:	Date:	
NCR:	⁄es	/ No				WORK ORDER NON-C	O	NFORM	MANCE / UPD			_	
										· - · · ·	QA Closed:	Date:	
Work Orde	· ·					DISPOSITION							
WOIR Olde	-					Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part N	No.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	-					Use-as-is	1 1	Therm	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR I	No.					Work Order Update]		Large Fab	Composite		Supplier	
				•	•							r	
Root					1	ption of work order update		nitial	Acti		Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descri	iption	Date	Verification	QC Inspector
Doc/Data	Щ								£ 3				
Equip/Tooling									(2)				
Operator													
Material													
Setup													
Other													
Process				İ									
Supplier													
Training													
Unapproved													
						F	AUL	T CATE	GORY				
Landi	_			4	_	General		,			1		7
		Bending			_	Bend		Grain			Ovalized		Pressure/Forced
	Ш	Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged	L	Inspect	ion Incomplete		Part Incorre	ct	Weld
		Crushed/0	Crimped.			Burrs	L	Instruct	ions Incomplete/U	Inclear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination] Mainte	enance		Part Moved		
		Heat Trea	t			Countersink	Mislabeled			Positioned \	N rong	_	
	П	Inspection	n Strip in	Tube		Cut Too Short	Г	Misread	d		Power Loss,	/Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

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Work Order ID:

91840

Parent Item:

D3183-044

Parent Item Name:

Bracket Assembly

Start Date: 10/19/12

Required Date: 11/09/12

Page 1

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:Pick:A04.02.18New issueKJ/DS

IPP Rev:B Changed Mat Size 08-06-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3121-21		Manufactured	No			140	Each	9.0000	2	8		2/2	
Bolt									42		f)/	3/0/	10
				Location		Loc Qty	<u>Le</u>	oc Code			,		
				ST235		9			Language Co.				
					6969	1			***		70-		
					9732	4					B 92	(36	66
					5660	1							6 (
					9097 9495	2			-	 			`
D2192 045			NI-	0.	9493	100	D1-	11.0000			171		/
D3183-045		Manufactured	No			100	Each	11.0000	2	8_		12 /	21
Bearing Assembly							_		CALLED TO SERVICE OF THE SERVICE OF		7	9/	
				Location		Loc Qty	Le	oc Code					•
				FG		5				/			
					8587	5					BS,	/ >	
				ST235B		1						15/1	B
					9400	1							(-)
				ST236		5							
	•				9697	4							
				8	8012	1							
M174B1.500X02.250 17-4 SS Bar 1.50 X2.250		Purchased	No			140	f	15.1242	0.4583	1.929684	14 b.a	12/1	2/11
				Location		Loc Qty	Lo	oc Code				1	-
				MAT031		15.1242							
				1	08309	0.58							
				~> 1		11.8333			1.5	12969			
					15806	2.1146							
				1:	22576	0.5963							

NCR: Y	es / No				WORK ORDER NON-O	CON	IFORN	MANCE / UPI	DATE	QA	Closed:	Da	te:	
Work Orde Part N NCR N	lo				Rework Skid-tube Crosstu Scrap Machining Small F Use-as-is Thermoforming Finishi Work Order Update Large Fab Composi			AGAINST D Crosstube Small Fab Finishing Composite	Prod. Eng. Coor. g Rec/Store/Packaging e Supplier				Engineering Quality Other	
Root				ł	iption of work order update	1	nitial				ign &			
Cause	Date	Step	Qty		or Non-conformance	Chi	ief Eng	Descr	ription		Date	Verificatio	n	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved								CONV	- ·					
une .						AUL	T CATE	GURY						
Landir	Cracks Crushe Cuffs Heat T Inspec	Not Conce	l. n Tube		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete/I enance eled	Unclear	Ove Par Par Par Pos	alized er/Under et Incorrec et Lost/Mi et Moved sitioned V wer Loss/	ssing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	Horque	waves in	EXTrusio	n I	IDrawing		out of (Laubration						

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	91840
Description: Bracket	Part Number:	D3183-4
Inspection Dwg: D3183 Rev: C1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing	Tolerance	Actual	Accept	Reject	Method of	Comments
Dimension		Dimension			Inspection	
R0.190	+/-0.030	RO.180	~		R-6	ref.
R0.063	+/-0.010	80.063	~		11	()
0.182	+/-0.010	0.182	~		Vern	68-01
0.070	+/-0.010	0.070		V	j (11
0.100	+/-0.010	0.100	.		- 11)
Ø0.201 x 0.100	+/-0.010	\$ 6 ZO3x.100	<u> </u>		11	1)
0.182	+/-0.010	0.182	~		11	()
5.32	+/-0.030	5.326	~		H-6	31006
5.036	+/-0.010	5.037	~		j)	1)
2.120	+/-0.010	2.120	~	1	- 1)	11
1.290	+/-0.010	1.290	~		6)	1)
0.365	+/-0.010	0.366	~		t)	1)
0.218	+/-0.010	0.210	~		Vern	GA-01
1.030	+/-0.010	1.030	~		11	- 11
1.90	+/-0.030	1.889	~		41	1)
1.012	+/-0.010	1.012	~		H-6	31006
Ø0.201 x 0.100	+/-0.010	\$0.203 x .100			Veca	6A-01
0.786	+/-0.010	0.786	~		4-6	3100c
Ø0.392	+0.002/-0.000	\$0.3925	~		Mic	6A-03
R0.19	+/-0.030	RO.188	✓		R-6	sef.
3.954	+/-0.010	3.954	~		H-6	31006
0.162	+/-0.010	0.159	~		Verc	GA-01
R0.19	+/-0.030	RO. 188	~		R-6	cef.
R0.25	+/-0.030	80.250	~		§ 1	H
4.26	+/-0.030	4.262	~		H-0	31006
2.800 Calculated dimension	+/-0.030	2.825	<u> </u>		Vern	GA-01
0.162	+/-0.010	0.162	~		11	et
0.615	+/-0.010	0,614	7		34	11
0.435	+/-0.010	0.436	~		h	11
0.200	+/-0.010	0.203	V		11	11
0.381	+/-0.010	0.380	/		11	11
0.032	+/-0.010	6.031	XAS		D-6	6A-08

Measured by: D.A 08	Audited by:	04	Preliminary Approval:	N/A
Date: 12 12 128 3-83	Date:	13.1.3	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3183-044	KJ/RF	
В	04.03.15	Changes as per revision C	KJ/JLM/RF	
C 4	04.06.15	Dimension 2.800 was 2.080; removed 1.155, 0.36 dimensions	KJ/JLM	
D	06.03.09	Dwg Rev update	KJ/JLM	
E	08.01.16	Dimensions revised	KJ/EC/DD	
F	10.09.23	Dimensions revised	KJ of	AA

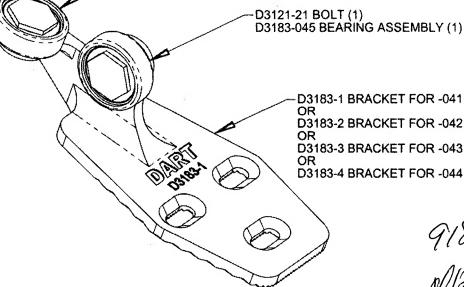




	At .	DRAWN BY	DART AEROSPACE L' HAWKESBURY, ONTARIO, CANA		
1	CHECK	EP	APPROVED	DRAWING NO.	REV. C
1	46	#	#	D3183	SHEET 1 OF 4
	DATE		•	TITLE	SCALE
		04.0)2.17	BRACKET ASSEMBLY	1:1
	A ,	0	3.01.24	NEW ISSUE	
	В	0	3.06.17	REMOVE BEARING; 1.012 WS 0.882	
	O	0,0	4.02.17	ADD -045/-9; 0.182 WAS 0.431	
	Сı	-#70	= 04.11.09	0-830 WAS 0-850	

DEO ATTACHED

D3183-045 BEARING ASSEMBLY (1)



D3183-1 BRACKET FOR -041 (SHOWN)

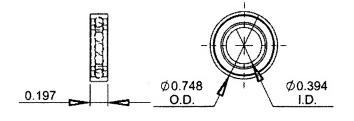
D3183-2 BRACKET FOR -042 (OPPOSITE)

D3183-3 BRACKET FOR -043 (SIMILAR)

D3183-4 BRACKET FOR -044 (SIMILAR)

91840 pl12-10-19

D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR) D3183-044 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING: SPECIFICATION CONTROL DRAWING

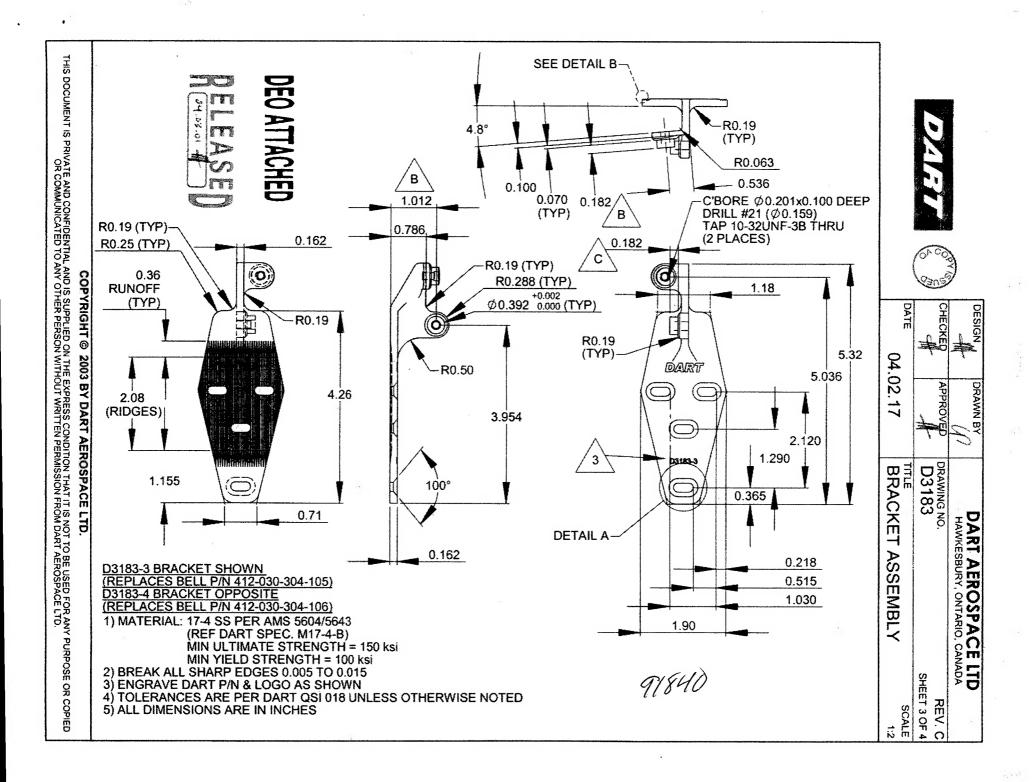
- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES

0.052 ±0.005 Ø0.600 +0.005 Ø0.394 0.000 I.D. O.D.

D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) **ANNEALED**
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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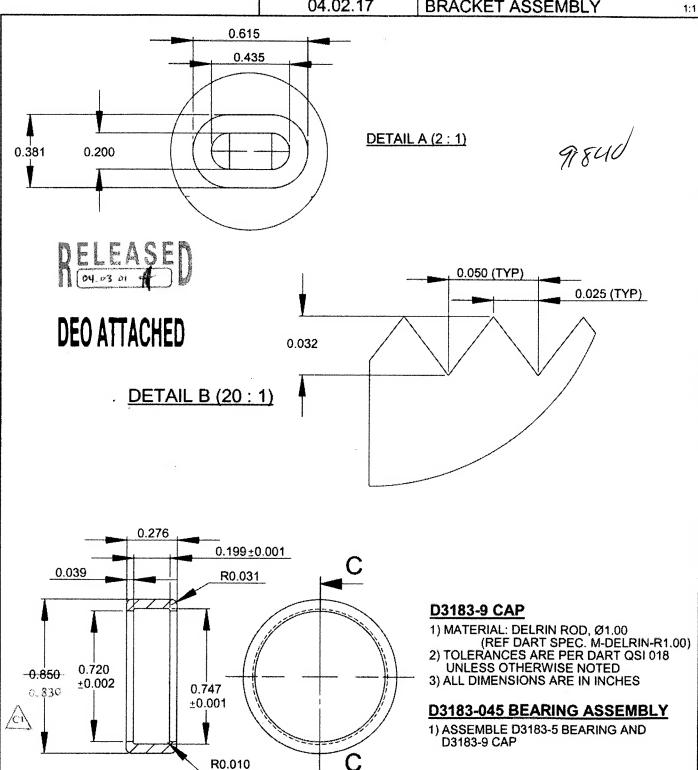
	e de la companya de l	4.			



SECTION C-C SCALE 2:1



	DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
	CHECKED	APPROVED	DRAWING NO.	REV. C	
1	#		D3 103	SHEET 4 OF 4	
	DATE		TITLE	SCALE	
	04.02.17		BRACKET ASSEMBLY	1:1	



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DRAWING N	NO. TITLE		, REV.C1	DART AEROSPACE	LTD D.E.O. NO.	SHEET NO.	SCALE
D3183	BRACKE	T ASSEMBLY		ENGINEERING ORD	DS183-C1-1	SHEET 1 OF 1	NTS
DRAWN	P	CHECKED	业	MFG. APPR.	APPROVED //	DE APPR.	
DATE	10.05.14	DATE	10.06.30	DATE (8.06.30	DATE 10/06/30	DATE (0/06/30	

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT:

Cr = 1720 N (386 lb) MIN [DYNAMIC]

Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012

91840



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